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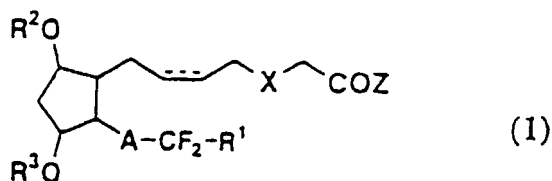
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(54) **Difluoroprostaglandin derivatives and their use**

(57) A fluorine-containing prostaglandin derivative of the formula (1) or a salt thereof, and a medicine containing it, particularly, as a preventive or therapeutic medicine for an eye disease:



wherein A is a vinylene group or the like, R<sup>1</sup> is an aryloxyalkyl group or the like, R<sup>2</sup> and R<sup>3</sup> are hydrogen atoms or the like, and Z is OR<sup>4</sup>, therein OR<sup>4</sup> is a hydrogen atom or an alkyl group or the like.

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# EUROPEAN SEARCH REPORT

Application Number  
EP 97 12 2702

| DOCUMENTS CONSIDERED TO BE RELEVANT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                        |                                                          |                                              |                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|----------------------------------------------|-----------------------------------------|
| Category                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Citation of document with indication, where appropriate, of relevant passages                                                                                                                                                                                                                          | Relevant to claim                                        | CLASSIFICATION OF THE APPLICATION (Int.Cl.6) |                                         |
| E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | WO 98 21181 A (ALCON LAB INC ;HELLBERG MARK R (US); KLIMKO PETER G (US); ZINKE PA) 22 May 1998<br>* claims *                                                                                                                                                                                           | 1-10                                                     | C07C405/00<br>A61K31/557                     |                                         |
| A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | ---<br>DATABASE CHEMABS<br>CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US<br>DN=121:50656,<br>LAKIN, K. M. ET AL: "Effects of fluorinated prostaglandins on platelet aggregation"<br>XP002100897<br>* abstract *<br>& EKSP. KLIN. FARMAKOL. (1994), 57(2), 39-41 CODEN: EKFAE9;ISSN: 0869-2092,<br>--- | 1-10                                                     |                                              |                                         |
| X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | JP 07 070 054 A (R TEC UENO:KK) 14 March 1995<br>page 24, compound 5<br>page 2, compound (II)<br>page 14, compound (II)<br>---                                                                                                                                                                         | 1-9                                                      |                                              | TECHNICAL FIELDS<br>SEARCHED (Int.Cl.6) |
| E                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | WO 98 12175 A (MATSUMURA YASUSHI ;MORI NOBUAKI (JP); NAKANO TAKASHI (JP); SAKATA) 26 March 1998<br>* claims *<br>-----                                                                                                                                                                                 | 1-10                                                     |                                              | C07C                                    |
| The present search report has been drawn up for all claims                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                        |                                                          |                                              |                                         |
| Place of search<br><b>THE HAGUE</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                        | Date of completion of the search<br><b>22 April 1999</b> | Examiner<br><b>BERTE, M</b>                  |                                         |
| <p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone<br/>Y : particularly relevant if combined with another document of the same category<br/>A : technological background<br/>O : non-written disclosure<br/>P : intermediate document</p> <p>T : theory or principle underlying the invention<br/>E : earlier patent document, but published on, or after the filing date<br/>D : document cited in the application<br/>L : document cited for other reasons<br/>.....<br/>&amp; : member of the same patent family, corresponding document</p> |                                                                                                                                                                                                                                                                                                        |                                                          |                                              |                                         |

EPO FORM 1503 03.82 (P4/C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
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22-04-1999

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